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(54) Title: DETERMINING AND SETTING THE FREQUENCY MODULATION INDEX OF A LASER IN A CPT FREQUENCY STANDARD

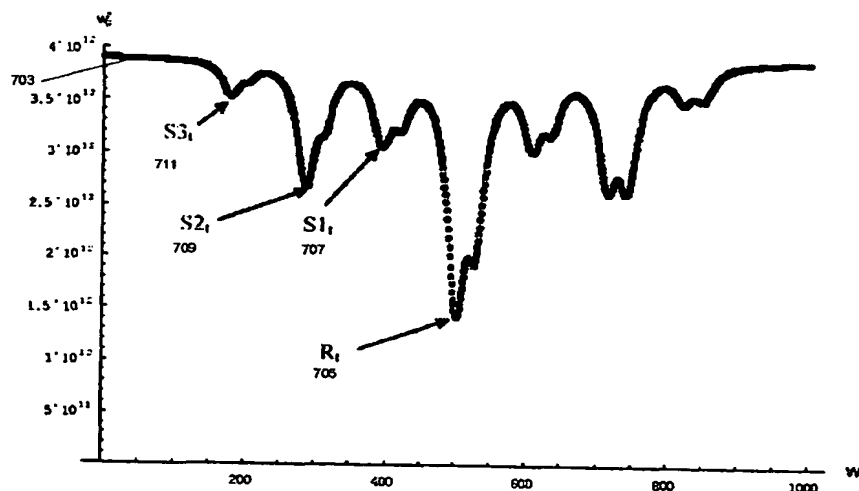


FIG. 1

(57) Abstract: A technique for determining the modulation index of a frequency-modulated laser source from the absorption spectrum that is produced when light from the laser passes through an alkali metal vapor cell. The absorption spectrum contains a primary minimum and a number of satellite minima and the modulation index is determined using ratios of the minima. The technique is used to calibrate the laser source of a CPT frequency standard so that it operates at a desired modulation index. Ways are disclosed of using the technique to calibrate the CPT frequency standard either manually or automatically. The calibration may be done when the CPT frequency standard is built, when the frequency standard is initialized, or during normal operation of the CPT frequency standard.

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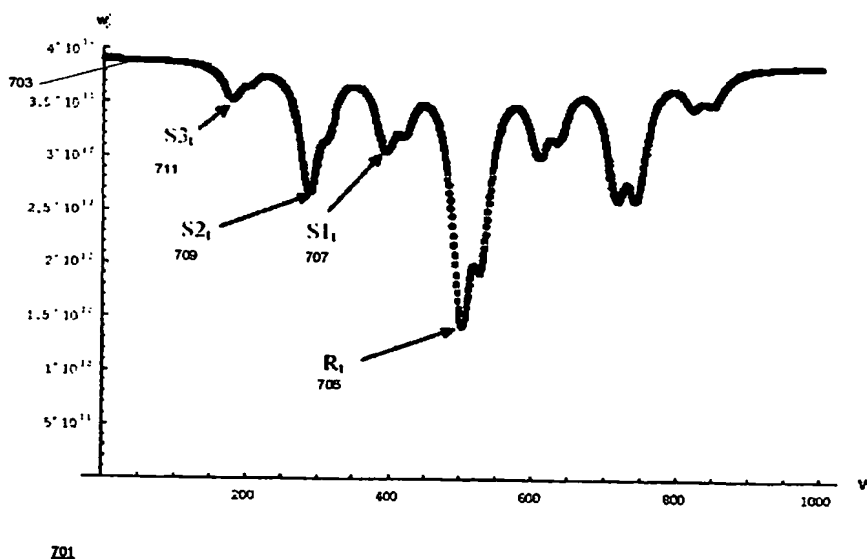
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